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Sequence Listing was accepted.

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Reviewer: markspencer

Timestamp: [year=2009; month=4; day=27; hr=15; min=51; sec=40; ms=549; ]

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Application No: 10511698

Version No: 2.0

Input Set:

Output Set:

Started: 2009-04-17 19:39:41.874

Finished: 2009-04-17 19:39:46.946

Elapsed: 0 hr(s) 0 min(s) 5 sec(s) 72 ms

Total Warnings: 120

Total Errors: 0

No. of SeqIDs Defined: 120

Actual SeqID Count: 120

Error code	Error Description
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W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
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W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
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W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2009-04-17 19:39:41.874  
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**Elapsed:** 0 hr(s) 0 min(s) 5 sec(s) 72 ms  
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**No. of SeqIDs Defined:** 120  
**Actual SeqID Count:** 120

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

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<110> von Knebel-Doeberitz, Magnus  
 Gebert, Johannes  
 Linnebacher, Michael  
 Woerner, Stefan  
 Ridder, Ruediger  
 Bork, Peer  
 Yuan, Yan Ping

<120> Neopeptides and Methods Useful for Detection and Treatment of  
 Cancer

<130> 03528.0145.00US00

<140> 10511698  
 <141> 2009-04-17

<150> PCT/EP 03/04083  
 <151> 2003-04-17

<150> EP 02 008 773.0  
 <151> 2002-04-18

<150> EP 02 008 771.4  
 <151> 2002-04-18

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 <151> 2002-04-18

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<170> PatentIn version 3.2

<210> 1  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: polypeptides  
 encoded by genes with coding microsatellites

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 Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile  
 1 5 10 15  
 Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser  
 20 25 30  
 Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg  
 35 40 45  
 Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala  
 50 55 60

Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg  
 65 70 75 80  
 Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu  
 85 90 95  
 Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr  
 100 105 110  
 Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser  
 115 120 125  
 Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser  
 130 135 140  
 Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala  
 145 150 155 160  
 Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp  
 165 170 175  
 Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met  
 180 185 190  
 Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp  
 195 200 205  
 Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln  
 210 215 220  
 Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu  
 225 230 235 240  
 Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala  
 245 250 255  
 Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys  
 260 265 270  
 Arg Gln Lys Lys Gln Asn Thr Ser Cys Ser Lys Asn Arg Gly Arg Thr  
 275 280 285  
 Thr Ala His Thr Lys Cys Trp Tyr Glu Gly Asn Asn Arg Phe Gly Leu  
 290 295 300  
 Leu Met Val Glu Asn Leu Glu Glu His Ser Glu Ala Ser Asn Ile Glu  
 305 310 315 320

<210> 2

<211> 304

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides  
encoded by genes with coding microsatellites

<400> 2

Met	Gln	Arg	Pro	Asn	Ala	His	Arg	Ile	Ser	Gln	Pro	Ile	Arg	Gln	Ile
1				5					10					15	
Ile	Tyr	Gly	Leu	Leu	Leu	Asn	Ala	Ser	Pro	His	Leu	Asp	Lys	Thr	Ser
			20					25					30		
Trp	Asn	Ala	Leu	Pro	Pro	Gln	Pro	Leu	Ala	Phe	Ser	Glu	Val	Glu	Arg
		35					40					45			
Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu	Ala
	50					55					60				
Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg	Arg
65					70					75				80	
Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile	Leu
			85						90					95	
Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys	Tyr
		100						105					110		
Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys	Leu	His	His	Leu	Gln	Ser
	115						120					125			
Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn	Ser
	130					135					140				
Pro	Gly	Lys	Glu	Glu	Leu	Gln	Glu	Asp	Gly	Ala	Lys	Met	Leu	Tyr	Ala
145					150				155					160	
Glu	Phe	Gln	Arg	Val	Lys	Ala	Gln	Thr	Arg	Leu	Gly	Thr	Arg	Leu	Asp
			165						170					175	
Leu	Asp	Thr	Ala	His	Ile	Phe	Cys	Gln	Trp	Gln	Ser	Cys	Leu	Gln	Met
		180						185					190		
Gly	Met	Tyr	Leu	Asn	Gln	Leu	Leu	Ser	Thr	Pro	Leu	Pro	Glu	Pro	Asp
	195							200				205			
Leu	Thr	Arg	Leu	Tyr	Ser	Gly	Ser	Leu	Val	His	Gly	Leu	Cys	Gln	Gln
	210					215					220				
Leu	Leu	Ala	Ser	Thr	Ser	Val	Glu	Ser	Leu	Leu	Ser	Ile	Cys	Pro	Glu
225					230				235					240	
Ala	Lys	Gln	Leu	Tyr	Glu	Tyr	Leu	Phe	Asn	Ala	Thr	Arg	Ser	Tyr	Ala
			245						250					255	
Pro	Ala	Glu	Ile	Phe	Leu	Pro	Lys	Gly	Arg	Ser	Asn	Ser	Lys	Lys	Lys
		260						265					270		

Gly Arg Arg Asn Arg Ile Pro Ala Val Leu Arg Thr Glu Gly Glu Pro  
275 280 285

Leu His Thr Pro Ser Val Gly Met Arg Glu Thr Thr Gly Leu Gly Cys  
290 295 300

<210> 3

<211> 282

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides  
encoded by genes with coding microsatellites

<400> 3

Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile  
1 5 10 15

Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser  
20 25 30

Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg  
35 40 45

Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala  
50 55 60

Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg  
65 70 75 80

Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu  
85 90 95

Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr  
100 105 110

Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser  
115 120 125

Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser  
130 135 140

Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala  
145 150 155 160

Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp  
165 170 175

Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met  
180 185 190

Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp

195

200

205

Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln  
 210 215 220

Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu  
 225 230 235 240

Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala  
 245 250 255

Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys  
 260 265 270

Lys Ala Glu Glu Thr Glu Tyr Gln Leu Phe  
 275 280

&lt;210&gt; 4

&lt;211&gt; 139

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: polypeptides  
 encoded by genes with coding microsatellites

&lt;400&gt; 4

Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr  
 1 5 10 15

Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile  
 20 25 30

Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe  
 35 40 45

Leu Phe Phe Phe Phe Glu Thr Gln Ser His Ser Val Thr Arg Leu Glu  
 50 55 60

Cys Ser Gly Thr Ile Ser Ala His Cys Asn Leu Cys Leu Pro Gly Ser  
 65 70 75 80

Ser Asn Ser Pro Ala Ser Ala Ser Arg Val Ala Gly Thr Ala Gly Thr  
 85 90 95

Cys Arg Arg Ala Gln Leu Ile Phe Val Phe Leu Ala Glu Met Gly Phe  
 100 105 110

His His Val Gly Arg Asp Gly Leu Asp Leu Asn Leu Val Ile His Pro  
 115 120 125

Pro Arg Ser Pro Lys Ala Leu Gly Leu Gln Ala  
 130 135

&lt;210&gt; 5

<211> 101  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: polypeptides  
encoded by genes with coding microsatellites

<400> 5  
Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr  
1 5 10 15  
Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile  
20 25 30  
Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe  
35 40 45  
Leu Phe Phe Phe Leu Arg His Ser Leu Thr Leu Ser Pro Gly Trp Ser  
50 55 60  
Ala Val Ala Arg Ser Arg Leu Thr Ala Thr Ser Ala Ser Gln Val Gln  
65 70 75 80  
Val Ile Leu Leu Pro Gln Pro Pro Glu Trp Leu Gly Leu Gln Ala Arg  
85 90 95  
Ala Ala Ala Pro Ser  
100

<210> 6  
<211> 53  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: polypeptides  
encoded by genes with coding microsatellites

<400> 6  
Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr  
1 5 10 15  
Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile  
20 25 30  
Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe  
35 40 45  
Leu Phe Phe Phe Phe  
50

<210> 7  
<211> 209  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides  
encoded by genes with coding microsatellites

<400> 7

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu  
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg  
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly  
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile  
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro  
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly  
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu  
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly  
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg  
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp  
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr  
165 170 175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Lys Glu Asn Asn Arg Arg Thr  
180 185 190

His His Met Gln Leu Met Ile Ser Leu Phe Lys Ser Pro Leu Leu Leu  
195 200 205

Leu

<210> 8

<211> 196

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides

encoded by genes with coding microsatellites

<400> 8

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu  
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg  
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly  
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile  
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro  
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly  
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu  
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly  
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg  
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp  
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr  
165 170 175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Arg Lys Thr Thr Glu Glu His  
180 185 190

Ile Ile Cys Asn  
195

<210> 9

<211> 202

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides  
encoded by genes with coding microsatellites

<400> 9

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu  
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg

20	25	30
Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly		
35	40	45
Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile		
50	55	60
Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro		
65	70	75 80
Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly		
85	90	95
Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu		
100	105	110
Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly		
115	120	125
Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg		
130	135	140
Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp		
145	150	155 160
His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr		
165	170	175
Ala Leu Leu Trp Gly Leu Lys Lys Lys Lys Gly Lys Gln Gln Lys Asn		
180	185	190
Thr Ser Tyr Ala Thr Asn Asp Leu Ile Ile		
195	200	

<210> 10

<211> 567

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides  
 encoded by genes with